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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/587,646	06/05/2000	Robert I.G. McLean	C1197-991120	8215

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EXAMINER

DASS, HARISH T

ART UNIT	PAPER NUMBER
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3628

DATE MAILED: 01/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/587,646

Applicant(s)

MCLEAN ET AL.

Examiner

Harish T Dass

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 0200.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter, particularly, an abstract idea.

As an initial matter, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "[p]romote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a patent to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural

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phenomena", and "abstract ideas". See *Diamond v. Diehr*, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCPA 1978). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. *In re Toma* at 857.

In *Toma*, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the

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"technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.*, the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See *State Street Bank & Trust Co.* at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, *State Street* abolished the Freeman-Walter-Abele test used in *Toma*. However, *State Street* never addressed the second part of the analysis, i.e., the "technological arts" test established in *Toma* because the invention in *State Street* (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the *Toma* test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in affirming a

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§101 rejection finding the claimed invention to be non-statutory. See Ex parte Bowman, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

In the present application, Claims 1-8 have no connection to the technological arts. None of the steps indicate any connection to a computer or technology.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 5 and 9-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Eder (US 6321205).

Re. Claims 1-2 & 9, Eder, discloses developing a data structure (account structure Assets and Liabilities elements and data dictionary) including a plurality of first assumed variables (value drivers) that have an influence on a non-financial value stream of the business enterprise and including a plurality of second assumed variables that have an influence on a financial value stream of the business enterprise [See entire document particularly, Abstract; Figures 4-6E; C1 L5 to C6 L65; C8 L26 to C10 L40], and determining a first outcome of the non-financial value stream of the business enterprise based upon the first assumed variables, the first outcome influencing at least one of the second assumed variables [C10 L40 to C12 L67], and determining a first present value of the financial value stream of the business enterprise based upon the first outcome and based upon the second assumed variables [Fig. 14-15; C5 L35 to C6 L25], and

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memory, storing and calculation engine (application software) [Fig. 1-4; C9 L42-43], and determining, in response to the occurrence or non-occurrence of one or more of the events (output values), whether one or more of the first and second assumed variables have changed and whether the corresponding financial or non-financial value stream has changed; and determining a second present value of the financial value stream taking into account the assumed variables that changed in response to the occurrence or nonoccurrence of the one or more of the events [C23 L45 to C24 L60] and, additionally see [C33 L10-L45; c35 L11-L23; C37 L23-L38; C39 L1-L15; C41 L40 to 56; C44 L6-L67].

Re. Claims 5 & 10, Eder discloses wherein the first outcome includes a non-financial metric (checks the element of value to determine ...) [C30 L11-L14].

Re. Claims 11-13, Eder discloses database (database engine), software, memory and storing data (elements) a filter coupled to the calculation engine (application software) for selecting certain ones of the first and second assumed variables to be delivered to the calculation engine (application software & checks the element of value to determine ... [C9 L42; C30 L11-L14]), wherein each of the first and second assumed variables is stored in the data structure in association with identification of an originator of the corresponding assumed variable, and wherein the filter selects the assumed variables to be delivered to the calculation engine according to the identifications stored in association with the assumed variables [see REF to claims 1 and claim 3].

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-4, 6-8, 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eder in view of (Robert Muksian "Financial Mathematics Handbook", Prentice-Hall, Inc., 1984) hereinafter Muksian.

Re. Claims 3-4, 6-8, 14-16 Eder discloses user's the ability to track the changes in elements of business value and total business value over time by comparing the current valuation to previously calculated valuations ... accurate simulation of future financial performance based on user-specified or system generated changes in value drivers ... [abstract; Figures 12, 15; C6 L43-L64; C11 L64 to C12 L30; C29 L49 to 30 L55]. Eder, explicitly, does not disclose altering one or more of the first and second assumed variables, and determining a second present value of the financial value stream taking into account the altered assumed variables or altering one or more of the first and second assumed variables, and determining a second outcome of the non-financial value stream taking into account the altered assumed variables and comprising selecting a stakeholder perspective from among a plurality of stakeholder perspectives for determining the first outcome and the first present value of the financial value

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stream, and determining a series of updated outcomes of the non-financial value stream of the business enterprise and a series of updated present values of the financial value stream of the business enterprise based upon and assumed variables in the data structure including any assumed variables that have changed in response to the occurrence or non-occurrence of one or more events, and presenting the first outcome and the first present value, wherein a level of detail at which the first outcome and the first present value is presented is selectable by a user, and wherein the filter selects a stakeholder perspective from among a plurality of stakeholder perspectives prior to providing first and second assumed variables to the calculation engine (application software). However, Muksian, discloses these steps [pages xv; 7-10, 135-149, 155-159, 248-253, 269, 311, 401, 452, 457, 462; fig. 1-1], specifically, tables in pages 269, 311, 401, 452, 457, 462 it clearly show that changing different parameters (assuming values, first or second) result different value (output or outcome) and these can relate to financial or non-financial assets. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to combine the teaching of Eder and Muksian and include variations of first and second values to get a variation of outputs (outcomes) and allow the stakeholder to use financial mathematical tools for analysis of complex financial statement, and calculating present value, future amount, annuity and amortization for determining the assets and liabilities of a company (business) with different forecasted (assumed) values and projections (outcomes). Additionally, Examiner's note, there are numerous financial management and financial

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accounting books for valuation of financial assets and variations in asset holdings and text books as a prior art which explain the present invention.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 CFR ' 1.111 (c) to consider the references fully when responding to this action.

US 5,220,500 to Baird et al, June 15, 1993 "Financial management system", this invention discloses a variety of financial management strategies have been applied to the problem of analyzing a universe of possible investments (for example, common stocks) and selecting particular investments for inclusion in a portfolio. The strategies typically accommodate assumptions and theories about economic performance as well as the goals to be achieved by the portfolio such as high return, appreciation, or low risk. The strategies may be applied based on facts about the various possible investments, such as historical market performance, balance sheet information, and earnings.

US 6,442,533 to Hinkle, August 27, 2002 "Multi-processing financial transaction processing", this invention discloses a financial transaction processing system, and in particular, to such a system that is capable of decomposing transactions into subtransactions and multi-processing subtransactions simultaneously.

US 5,884,285 to Atkins, Mar. 16, 1999 "System for managing financial accounts by reallocating funds among accounts", this invention discloses a method and apparatus which provides an integrated financial product package. This system is realized, in the preferred embodiment, when implemented on a real-time computer system, and accordingly will be described in such context. It will be understood, however, that the invention may be applied to numerous other contexts.

US 6,321,225 to Heckerman et al, Nov. 20, 2001 "Abstracting cooked variables from raw variables", it discloses data modeling, and more particularly to abstracting cooked variables from raw variables, and a data set that has a plurality of records is input into a system, where each record has a value for each of a plurality of raw transactional variables.

US 5,189,608 to Lyons et al, Feb 23, 1993 "Method and apparatus for storing and generating financial information employing user specified input and output formats", this invention discloses an advanced financial reporting and analysis software package. The package collects, organizes, manages and consolidates financial data and provides user defined capabilities for creating financial and corporate reports.

Basic Financial Management by John D. Martin et al, Prentice-Hall, Inc., 1991 (PTO Library no. HG 4026B318 1991).

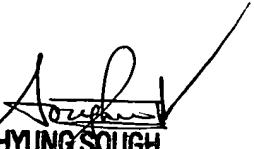
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harish T Dass whose telephone number is 703-305-4694. The examiner can normally be reached on 8:00 AM to 4:50 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung S Sough can be reached on 703-308-0505. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Harish T Dass *HTD*
Examiner
Art Unit 3628
12/16/2003


HYUNG SOUGH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600